

ACC NR: AP6006892

SOURCE CODE: PO/0046/65/010/002/0131/0132

AUTHOR: Dabek, Tadeusz; Korbol, Kazimierz

ORG: Institute of Nuclear Technology, AGH, Krakow (Instytut Techniki Jadrowej AGH);  
Department VI, Institute of Nuclear Research, Krakow (Instytut Badan Jadrowych,  
Zaklad VI)

TITLE: Automatic recording attachment for fast registration of the amplitude  
analysis of pulses going to the 100-channel type AI-100-1 analyzer

SOURCE: Nukleonika, v. 10, no. 2, 1965, 131-132

TOPIC TAGS: pulse analyzer, electronic circuit, pulse amplitude, nuclear physics  
apparatus

ABSTRACT: This communication describes the attachment to a  
100-channel type AI-100-1 (USSR) analyzer. It contains an elec-  
tronic circuit by means of which the amplitude analysis can  
be self-recorded very fast. The circuit consist of two compo-  
nents: a set of summators and a register. The basic design and  
construction are described. An example of a histogram is shown,  
the energy distribution of Cs<sup>137</sup> + Hg<sup>203</sup> -- obtained by using  
this device. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09, 20 / SUBM DATE: 19May64

Card 1/1

21916-66 EWT(m)/T/EWA(h) IJP(o)

ACC NR: AF6011477 SOURCE CODE: PO/0046/65/010/09-/0619/0622

AUTHOR: Dabek, Tadeusz--Dombek, T.; Korbek, Kazimierz--Korbek', K.

ORG: /Dabek/ Bureau for the Organization of Technical Research, Krakow (Biuro Urzadzon Techniki Jadrowej); /Korbek/ Department of High Energy Physics, Institute of Nuclear Research, Krakow (Zaklad Fizyki Wysokich Energi, Instytut Badan Jadrowych)

TITLE: Detecting probes operating in a single-cable system of pulse transmission and power supply

SOURCE: Nukleonika, v. 10, no. 9-10, 1965, 619-622

TOPIC TAGS: radiation detector, pulse cable

ABSTRACT: The problem of pulse transmission from nuclear detectors for long distances by means of a single cable supplying the high voltage to the counter is considered. Many circuits discussed in the literature are described as well as two types of probes (with scintillation and proportional counters) operating in a single-cable system of pulse transmission and power supply. This system is advantageous for use under field conditions, especially in a bore hole logging. Orig. art. has: 2 figures. /Based on author's Eng. abst. / [NA]

SUB CODE: 18 / SUBM DATE: 16Apr65 / OTH REF: 004

Card 1/1

KORBEL, I.

"Poplar moth (Phyllocnistis sufusella Z.), a pest in poplar nurseries." (p.127).  
BIOLOGICKY SBORNIK. (Slovenska akademie vied a umeni) Bratislava. Vol. 7, No. 1/2,  
1952.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

KORBEL, L

TECHNINUS REFIPENNIS Gyll (Coleoptera, Staphylinidae) in the Danube near  
Bratislava. p. 373

Vol. 10, No. 3, 1955

BIOLOGIA

Bratislava, Czechoslovakia

So: Eastern European Accession Vol.5, No. 4, April 1956

KORBEL., L.

DICTYOPHARA EUROPEA L. (Homoptera, Dictyopharidae) on Zitny Ostrov (Schutt)  
p. 372

Vol. 10, No. 3, 1955  
BIOLOGIA  
Bratislava, Czechoslovakia

So. Eastern European Accession Vol. 5, No. 4, April 1956

KORBEL, L.

DUVALIUS BOKORI sciki (Coleoptera, Carabidae) on the Silica plateau. p. 372

Vol. 10, No. 3, 1955

BIOLOGIA

Bratislava, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4 April 1956

KORBEL, L.

SCIENCE

Periodicals: BIOLOGIA. Vol. 10, No. 6, 1955

KORBEL, L. Professor Oskar Ferianc's fifty years; a biographic sketch. p. 784.

Working conference on the history of medicine and biological sciences. p.786.

Monthly List of East European Accessions (EEAI) LC, Vol.8, No. 5,  
May 1959, Unclass.

KORBEL, L.

"Notes on the occurrence of Ixodid ticks in the Danube basin  
and in the Little Carpathians."

p. 67 (Acta, Vol. 1, no. 2, 1956, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9,  
September 1958



Korbal, L.

1st Entomologic Conference. P. 308  
BIOLOGIA. (Slovenska akademia vied) Bratislava  
Vol. 11, no. 3, 1956

Source: EEAL - LC Vol. 5. No. 10 Oct. 1956

CZECHOSLOVAKIA/Special and General Zoology - Insects.

0-3

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 69802  
Author : Korbel, L.  
Inst :  
Title : Special Entomological Problems in Slovakia.  
Orig Pub : Biologia, 1956, 11, No 8, 491-494

Abstract : The study of mountain entomofauna is of a special theoretical interest; the major concentration of study is directed towards the noxious insects and their ecology, which is needed for their destruction. The study of coccidia, the American White Butterfly, Mediterenian Fruit fly, Aphis (Doralis) fabae, Gnorimoschema ocellatellum et al., and also the bloodsucking insects is emphasized.

Card 1/1

- 21 -

KOPPEL, L.

KOPPEL, L. Vraz'z ethnographic exhibition in the Naprstek museum in 1898. p. 101.

Vol. 5, no. 1, 1957  
CESKOSLOVENSKA ETNOGRAFIE  
GEOGRAPHY & GEOLOGY  
Czechoslovakia

So: East European Accession, Vol. 6, No. 5, May 1957

KOBEL, I.

The first letter of E.St/Vraz to Vojtech Naprstek. p.212.  
(CZECHOSLOVAK ETHNOGRAPHIE, Vol. 5, no. 2, 1957, Praha, Czechoslovakia.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 12, December 1957 Incl.

ROSEN, L.

"Study of the insect fauna of a potato field with respect to Coleoptera." p. 517.

BIOLOGICKE PRACE. Bratislava, Czechoslovakia, Vol. 2, no. 12, 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 8, August, 1959.  
Uncl.

Korbel, L. ; Trpis, M.

Report on the 2d session of the Czechoslovak Entomologic Society in Slovakia at the Slovak Academy of Sciences. p. 550.

Biologia, Bratislava, Czechoslovakia, Vol. 14, no. 7, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. no. 10, Oct, 1959<sup>8</sup>  
Uncl.

KORBEL, Ladislav

Mass occurrence of *Aptinus bombardae* Ill. (Coleoptera, Carabidae) in the Bojnice region. Biologia 15 no.6:457-459 '60. (EBAI 9:10)

1. Zoologický ústav Prírodovedeckej fakulty Univerzity Komenského, Bratislava.

(BEETLES) (CARABIDAE) (SLOVAKIA--APTINUS)

KORBEL, V.

The importance of experimental stress analysis in motor vehicle research.

p. 147 (Automobil) Vol. 1, no. 5, May 1957 Praha, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, Jan. 1958



KORBEL, V.

FOGI, J.

A contribution to the practical application of strain gauges.

p. 284 (Automobil) Vol. 1, No. 9, Sept. 1957, Czechoslovakia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EFAI) LC. Vol. 7, No. 1, Jan. 1958

L 31771-66 I

ACC NR: AP6021698

SOURCE CODE: CZ/0032/66/016/001/0030/0034

AUTHOR: Korbela, Viktor (Engineer; Prague)

ORG: none

TITLE: Form factors recommended in Czechoslovak and British standards for calculating stress conditions in gear teeth

SOURCE: Strojirenstvi, v. 16, no. 1, 1966, 30-34

TOPIC TAGS: transmission gear, material fracture, material deformation

ABSTRACT: A comparison is made of the values of the form factors prescribed in the Czechoslovak and British standards for calculating gears resistant to fracture and deformation. The study covers spur and bevel gears with spiral and straight involute teeth using the Merritt correction. Discrepancies between the results obtained with the two standard calculating methods are explained, and formulas are derived for the relationship between the form factors in the two sets of standards. Orig. art. has: 6 figures and 15 formulas. [Based on author's Eng. abst.] [JPRS]

SUB CODE: 13, 20 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 005

Card 1/1

UDC: 621.833.1:621.833.2

on the elastic scattering of protons on deuterons at an energy of  
10 MeV. Zhurnal Fiz. Khim. 44, no. 10: 741-752, 1970.

Faculty of Technical and Nuclear Physics of the French Higher  
School of Technology, France 1, Archaux Y.

67003

24.6900

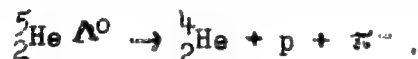
AUTHORS: Zdeněk Korbel, Ladislav Rob

CZECH/37-59-1-9/26

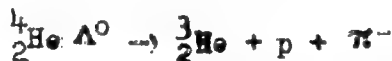
TITLE: Meson Decays of Light Hyperfragments

PERIODICAL: Československý časopis Pro Fysiku, 1959, Nr 1, pp 57-59

ABSTRACT: About 80 meson decays of hyperfragments have so far been reported (Refs 2, 3). In agreement with Ref 4, we assume that further measurements on hyperfragments are useful for a more accurate determination of the binding energies between the hyperon  $\Lambda^0$  and the nuclei. In a nuclear emulsion exposed to  $K^-$  mesons in the Berkeley accelerator, we have found several decays of hyperfragments at rest. We deduced the binding energies using Refs 5-9. The first hyperfragment disintegrated into three charged particles, which were identified as:



The binding energy of the hyperon was  $(1.9 \pm 0.5)\text{MeV}$ . The second hyperfragment decayed according to:



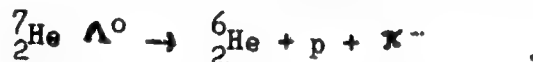
4

Card 1/2

67003  
CZECH/37-59-1-9/26

Meson Decays of Light Hyperfragments

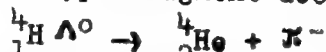
The binding energy of the hyperon was  $(0.8 \pm 0.5)\text{MeV}$ .  
The third hyperfragment decayed according to:



This binding energy was  $(2.7 \pm 0.6)\text{MeV}$ .  
The fourth hyperfragment decayed according to:



The binding energy was  $(0.0 \pm 0.5)\text{MeV}$ .  
The fifth hyperfragment decayed according to:



The binding energy was  $(1.3 \pm 0.4)\text{MeV}$ .

These binding energies are in good agreement with those measured previously (Refs 2, 3).

There are 1 figure, 1 table and 9 references, of which 8 are English and 1 Polish.

ASSOCIATION: Fakulta technické a jaderné fyziky, Praha  
(Department of Technical and Nuclear Physics, Prague)

SUBMITTED: July 26, 1958

Card  
2/2

LORSE L.R.

19  
Meson decay of light hyperfragments. Zdeněk Korbel  
and Ladislav Kob (Fac. Nuclear Mech. Phys., Prague).  
Czechoslov. J. Phys. 9, 288-90(1969)(in Russian).—The  
binding energies of 6 types of light hyperfragments, i.e., of  
at. nuclei of light elements containing one hyperon instead  
of one neutron, are measured. The hyperfragments origi-  
nate by means of the interaction of  $K^-$  mesons with the  
nuclei of light elements contained in the emulsion.

A. Kremheller

2-4E3c  
4E3d

3

TA  
1/1

19 19 5  
Isotonic decay of a  $\Sigma^+$  hyperon with an associated electron pair. Ladislav Bob and Zdeněk Korbel (Karlov Univ., Prague). *Nuclear Phys.* 13, 200-1 (1959).—Nuclear emulsion plates were irradiated with  $K^-$  mesons from a Berkeley accelerator. The  $\Sigma^+$  hyperon was emitted from a star produced by  $K^-$  meson capture at rest; 1  $\pi^-$  meson and a recoil were observed simultaneously. The proton energy was estd. from its range to be  $(29.4 \pm 0.5)$  m.e.v.  
Norman E. Pickett

S/120/61/000/001/011/062  
EO32/E114

AUTHORS: Gramenitskiy, I.M., Korbel, Z., and Rob, I.

TITLE: Determination of the Sign of Particles Recorded in an Emulsion

PERIODICAL: Pribery i tekhnika eksperimenta, 1961, No.1, pp.42-44

TEXT: A stack of emulsions was placed in the internal proton beam of the 9 GeV synchrophasotron. The magnetic field at the stack was about 1.2 koersted, and a measurement was made of the deflection of the secondary charged particles by the magnetic field. The ratio of the change in the direction of a track due to the magnetic field  $\theta_M$  and due to multiple scattering  $\theta_K$  is given by:

$$\theta_M / \theta_K \approx 3.5 \times 10^{-5} H \beta / t$$

where H is the magnetic field in koersted, t is the distance in cm, and  $\beta$  is the ratio of the velocity of the particle to the velocity of light. For large energies ( $\beta \rightarrow 1$ ) the ratio is a function of H and t only. A reliable determination of the sign  
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S/120/61/000/001/011/062  
E032/E114

Determination of the Sign of Particles Recorded in an Emulsion of the particles can be made when  $\sigma_M/\sigma_K \gg 1$ . However, this requires fields of a few tens of koe and track lengths of some tens of cms. However, it is often sufficient to consider the statistical distribution of the particles over the signs. It is then sufficient to use much smaller track lengths and to determine the distribution of the quantity

$$\gamma = \sigma_M/\sigma_K \sqrt{t}$$

C.C. Dilworth et al. (Ref.2) and C.C. Dilworth et al. (Ref.3) have determined the signs of charged particles, using emulsions placed in a magnetic field of 34 koe. They have measured the angles  $\theta_i$  for successive cells over a total length  $t$ , and calculated the quantity

$$\gamma = \sum \theta_i / \sum \theta_i \sqrt{t}$$

Their results show that this method can be used to determine the signs of charged particles. However, the present authors point  
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S/120/61/000/001/011/062  
E032/E114

**Determination of the Sign of Particles Recorded in an Emulsion**

out that the above method is sensitive to C-distortions which may imitate magneyc deflections. In the case of an emulsion irradiated with a well-collimated beam of high-energy particles, the effect of the distortions may be minimised by measuring the angles  $\Theta_M$  of secondary particles relative to the beam axis, as indicated by V.I. Veksler. The present authors have used a stack of НИКФН-Р (NIKFI-R) emulsions containing  $10 \times 20 \times 0.04 \text{ cm}^3$  plates. Secondary tracks produced on interaction between the primary protons and the emulsion nuclei were selected subject to the following conditions: a) the dip angle must be less than  $4^\circ$ , b) the magnitude of  $p\beta$  as estimated from multiple scattering must be of the order of 1-2 GeV/c, and c) the angle between the primary track and the secondary track in the plane of the emulsion must be less than  $30^\circ$ . 20 secondary tracks were measured (total length  $155 \times 3 \text{ cm}$ ). It was found that statistical determination of the signs of the particles was possible with  $t \sim 6-10 \text{ cm}$ . The following results were obtained:  $|\gamma| = 0.45 \pm 0.04$ ,  $\gamma_+ = +0.46 \pm 0.04$ , and  $\gamma_- = -0.44 \pm 0.08$ .

Card 3/4

S/120/61/000/001/011/062  
E032/E114

Determination of the Sign of Particles Recorded in an Emulsion  
The theoretical values of these quantities (including multiple scattering effects) are 0.47, +0.48 and -0.45 respectively. With fields higher by a factor of 5, momenta of fast particles could also be determined.

Acknowledgements are expressed to M.Ya. Danysh, V.B. Lyubimov, M.I. Podgoretskiy for valuable advice, and to A.I. Maklachkova for taking part in the measurements.  
There are 2 figures and 3 references: 1 Soviet and 2 non-Soviet.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy  
(Joint Institute of Nuclear Research)

SUBMITTED: January 6, 1960

Card 4/4

GRAMENITSKIY, I.M.; KORBEL, Z.; ROB, L.

Determination of the charge sign of particles in a photoemulsion.  
Prib. i tekhn. eksp. 6 no.1:42-44 Ja-F '61. (MIRA 14:9)

1. Ob"yedinennyy institut yadernykh issledovaniy.  
(Photographic emulsions) (Photography, Particle track)

VISHKI, T.; GRAMENITSKIY, I.M.; KORBEL, Z.; NOMOFILOV, A.A.; PODGORETSKIY,  
M.I.; ROB, L.; STREL'THOV, V.N.; TUVDENDORZH, D.; KHVASTUNOV, M.S.

Inelastic interactions between protons and nucleons at an energy  
of 9 Bev. Zhur.eksp.i teor.fiz. 41 no.4:1069-1075 0 '61.  
(MIRA 14:10)

1. Ob'yedinenyy institut yadernykh issledovaniy.  
(Protons) (Nucleons)

KORBEL, Zofia (Krakow); KORDYLEWSKI, Jerzy (Krakow)

Photographic observations of Comet Mrkos 1957 d. Acta astronom  
9 no.1:50 '59.

L 19500-65 EWT(m) SSD/SSD(c)/AFWL/DIAAP  
ACCESSION NR: AP4048326

Z/0055/64/014/010/0741/0752

AUTHOR: Korbel, Z.

TITLE: On the elastic scattering of protons on deuterons at an energy of 8.2 Mev

SOURCE: Chekhoslovatskiy fizicheskii zhurnal, v. 14, no. 10, 1964, 741-752

TOPIC TAGS: elastic scattering, proton deuteron scattering, nuclear photoemulsion, total cross section, high energy scattering

ABSTRACT: The elastic scattering of protons on deuterons at an energy of 8.2 Mev was studied in a range of small scattering angles by means of the nuclear photoemulsion method. A stack of 20  $10 \times 10$  cm nuclear photoemulsions of the NIKFI-R type with a mean thickness of 420  $\mu$  was used. The emulsions were diluted with heavy and normal water to a thickness of 955  $\mu$ , then irradiated with an internal beam of protons in the synchrophasotron of the Joint Institute of Nuclear Research in Dubna. The beam had an intensity of  $3.36 \times 10^5$  protons/

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L 19500-65

ACCESSION NR: AP4048326

4

cm<sup>2</sup>, made an angle of 88.5 deg with the plane of the emulsion, and had an angular half-width of 4.5'. A total of 12.8 cm<sup>2</sup> of emulsion, 4.01 km of proton tracks, was scanned by means of Zeiss-Iumipan microscopes at a magnification of 630X, and a total of 445 two-prong stars were found and measured. After corrections for quasi-events, 114 events of p-d elastic scattering and 62 events of p-p scattering were noted. The differential cross section of p-d scattering was determined in a range of scattering angles of 1.3 to 10 degrees in CMS. The total cross section of p-d elastic scattering in this range of angles was found to be  $\sigma_{el}(p-d) = (9.74 \pm 1.10)$  mb. In addition, the cross section for p-p scattering at the same energy for solid angles of 1.3 to 19.0 deg in CMS was  $\sigma_{el}(p-p) = (12.24 \pm 1.70)$  mb. The effective radius of interaction between protons and deuterons during elastic scattering at 8.2 Bev was determined from the optical model for a "black disk,"  $R = (2.25 \pm 0.10) \times 10^{-13}$  cm. "The author thanks Prof. Dr. V. Patrzilka, Corresponding Member of the Czechoslovak Academy of Sciences for his continual interest and help, also Dr. J. Perngr and J. Fizer, CSc. of the Institute of Physics, Czechoslovak Academy of Sciences for valuable discussions." Orig. art. has: 2 figures and 2 tables.

Card 2/3



L 19500-65

ACCESSION NR: AP4048326

ASSOCIATION: Faculty of Technical and Nuclear Physics, Technical  
University, Prague

SUBMITTED: 06May64

ENCL: 00

SUB CODE: NP

NO REF SOV: 009

OTHER: 034

Card 3/3

DALKHAZHAY, N.; ZLATEVA, A.Y.; KORBEL, Z.F.; MARKOV, P.K.; TODOROV, T.S.;  
TUVDENDORZH, D.; CHERNEV, Kh.M.; SHAFRANOVA, M.G.

Elastic scattering of 4Gev./c mesons by protons. Zhur. eksp.  
i teor. fiz. 47 no.1:12-15 J1 '64. (MIRA 17:9)

1. Ob'yedinennyy institut yadernykh issledovaniy. 2. Sotrudniki  
Instituta fiziki i khimii Mongol'skoy Akademii nauk, Ulan-Bator  
(for Dalkhazhav, Tuvdendorzh). 3. Sotrudniki Fizicheskogo  
instituta i atomnoy nauchno-issledovatel'skoy laboratorii  
Bolgarskoy Akademii nauk, Sofiya. (for Zlateva, Markov, Todorov,  
Chernov).

KIRILLOVA, L.F.; NIKITIN, V.A.; PANTUYEV, V.S.; SVIRIDOV, V.A.; STRUNOV, L.N.;  
KHACHATURYAN, M.N.; KHRISTOV, L.G.; SHAFRANOVA, M.G.; KORBEL, Z.; ROB, L.;  
DAMYANOV, S.; ZLATEVA, A.; ZLATANOV, Z.; YORDANOV, V. [Iordanov, V.];  
KANAZIRSKI, Kh.; MARKOV, P.; TODOROV, T.; CHERNEV, Kh.; DALKHAZHAY, N.;  
TUVDENDORZH, D.

Elastic pp and pd-scattering at small angles in the energy range  
2 - 10 Bev. IAd. fiz. 1 no.3:533-539 Mr '65. (MIRA 18:5)

1. Ob'yedinennyy institut yadernykh issledovaniy. 2. Vyssheye  
tekhnicheskoye uchilishche, Praga (for Korbelt, Rob). 3. Fizicheskiy  
institut Bolgarskoy Akademii nauk, Sofiya (for Damyanov, Zlateva,  
Zlatanov, Yordanov, Kanazirski, Markov, Todorov, Chernev). 4. Institut  
khimii i fiziki, Ulan-Bator, Mongol'skaya Narodnaya Respublika (for  
Dalkhazhav, Tuvdendorzh).

L 24301-66 ENT(m) DIAAP

ACC NR: AP6006795

SOURCE CODE: UR/0386/66/003/001/0015/0021

AUTHOR: Zolin, L. S.; Kirillova, L. F.; Liu, Ch'ing-ch'iang; Nikitin, V. A.; Pantu-  
yev, V. S.; Sviridov, V. A.; Strunov, L. N.; Khachatryan, M. N.; Shafranov, M. G.;  
Korbel, Z.; Rob, L.; Devinski, P.; Zlatanov, Z.; Markov, P.; Khristov, L.; Chernev,  
Kh.; Dalkhazhav, N.; Tuvdendorzh, D.

ORG: [Zolin, Kirillova, Liu, Nikitin, Pantuyev, Sviridov, Strunov, Khachatryan,  
Shafranov] Joint Institute of Nuclear Research, Dubna (Ob'yedinennyi institut yader-  
nykh issledovaniy); [Korbel, Rob] Czechoslovakian Higher Technical School, Prague  
(Cheshskoye vyzshneye tekhnicheskoye uchilishche); [Devinski, Zlatanov, Markov, Khris-  
tov, Chernev] Physics Institute, Bulgarian Academy of Sciences, Sofia (Fizicheskiy  
institut Bolgarskoy akademii nauk); [Dalkhazhav, Tuvdendorzh] Institute of Physics  
and Chemistry, Mongolian Academy of Sciences, Ulan Bator (Institut fiziki i khimii  
Mongol'skoy akademii nauk)

TITLE: Real part of the pn scattering amplitude in the energy interval 2--10 Gev

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.  
Prilozheniya, v. 3, no. 1, 1966, 15-21

TOPIC TAGS: proton scattering, neutron scattering, scattering amplitude, differen-  
tial cross section, deuteron reaction

ABSTRACT: On the basis of experimental data obtained by the authors on elastic pn  
scattering in the energy interval 1--10 Gev, and information on pp scattering ampli-  
tude in this energy range, the authors determined the real part of the scattering

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L 24301-66

ACC NR: AP6006795

amplitude by means of an experiment involving registration of slow recoil deuterons from a film target of deuterated polyethylene 0.5--0.6  $\mu$  thick. The investigated range of the squared momentum transfer was  $0.003 < |t| < 0.2$  (Gev/c)<sup>2</sup>. Plots are presented of the differential cross sections vs. the square of the momentum transfer and an empirical formula is given for these plots. The value obtained for the total cross section of elastic pd scattering at 6 Gev is several times smaller than that measured by others. In the small-angle region of pd scattering, constructive interferences were observed between the Coulomb and nuclear scatterings. From the obtained real part of the pd scattering amplitude, and from a comparison of the obtained data with earlier measurements by the authors of the pp scattering amplitude of the same energies (ZhETF v. 50, 76, 1966), the estimated real part of the pn scattering amplitude is +0.2, -0.06, -0.45, and -0.40 for 2, 6, 8, and 10 Gev respectively. The small nonzero real part of the pn scattering amplitude agrees with data obtained at CERN (G. Bellettini et al., Internat. Conf on Elementary Particles, Oxford, 1965). Orig. art. has: 2 figures, 3 formulas, and 2 tables.

SUB CODE: 20/ SUBM DATE: 12Nov65/ ORIG REF: 005/ OTH REF: 005

Card 2/2

L 22122-66 EWT(1)

ACC NR: AP6004922

SOURCE CODE: UR/0056/66/050/001/0076/0077

AUTHOR: Kirillova, L. F.; Nikitin, V. A.; Sviridov, V. A.; Strunov, L. N.;  
Shafranova, M. G.; Korbel, Z.; Rob, L.; Zlateva, A.; Markov, P. K.; Todorov, T.;  
Khristov, L.; Chernov, Kh.; Dalkhazhav, N.; Tuvdendorzh, D.

ORG: [Kirillova; Nikitin; Sviridov; Strunov; Shafranova] Joint Institute of  
Nuclear Research, Dubna (Ob'yedinennyi institut yadernykh issledovaniy); [Korbel;  
Rob] Czechoslovakian Higher Technical School, Prague (Chekhoslovatskoye Vyssheye  
tekhnicheskoye uchilishche); [Zlateva; Markov; Todorov; Khristov; Chernov] Physics  
Institute, Bulgarian Academy of Sciences, Sofia (Fizicheskiy institut Bolgarskoy  
Akademii nauk); [Dalkhazhav; Tuvdendorzh] Institute of Chemistry and Physics,  
Mongolian Academy of Sciences, Ulan-Bator (Institut khimii i fiziki Mongol'skoy  
Akademii nauk)

TITLE: Real part of the pp elastic scattering amplitude at 2, 4, 6, 8, and 10 Gev

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 1, 1966,  
 76-77

TOPIC TAGS: proton scattering, elastic scattering, scattering amplitude, differ-  
ential cross section, nuclear scattering

Card 1/2

L 22122-66

ACC NR: AP6004922

ABSTRACT: This is a continuation of earlier work by the authors (Phys. Lett. v. 13, 93, 1964) in which they present results of the measurements of the real part of the nuclear elastic scattering amplitude for an energy of 4 Gev, and more precise data for energies 2, 6, 8, and 10 Gev, taking into account the relativistic corrections. The experimental technique was described elsewhere (PTE no. 6, 18, 1963). The differential cross section was measured in the interval  $0.003 < |t| < 0.2 \text{ (Gev/c)}^2$  ( $t$  = momentum transfer squared). The analysis of the obtained data as well as those reported by others was based on the Bethe formula (Ann. of Phys. v. 3, 190, 1958) with allowance for radiative corrections. The results agree well with the theoretical curve proposed by Soding (Phys. Lett. v. 8, 286, 1963), up to an energy of 20 Gev, above which some discrepancy appears. Orig. art. has: 1 figure and 2 formulas.

SUB CODE: 20/      SUBM DATE: 25Aug65/      ORIG REF: 001/      OTH REF: 008

Card 2/2

BK

KORBEL, Z.E.; SHAFRANOVA, M.G.; ZLATEVA, A.I.; MARKOV, P.K.;  
TODOROV, T.S.; CHERNEV, Kh.M.; DALKHAZHAY, N.; TUVDENDORZH, D.;  
ZRELOVA, N.N., tekhn. red.

[Elastic scattering of  $\pi^-$ -mesons on protons at a momentum  
of 4 GeV/c] Uprugoe rasseianie  $\pi^-$ -mezonov na protonakh pri  
impul'se 4 GeV/s. Dubna, Ob"edinennyi in-t iadernykh issledo-  
vaniy, 1963. 7 p. (MIRA 17:1)

1. Institut fiziki i khimii Mongol'skoy Akademii nauk, Ulan-  
Bator (for Dalkhazhav, Tuvdendorzh).



KORHELAR, J; VESELA, D; OHR, O.

Determination of phenol substances in renal diseases. Cas.  
lek. cesk. 89 no.32:899-901 11 Aug. 1950. (CLML 20:1)

1. Of the Second Internal Clinic of the Charles University in  
Prague (Head--Prof. Ant. Vancura, M. D.)

EXCERPTA MEDICA Sec. 6 Vol. 11/10 Oct. 57

KORBELAR J.

6006. KORBELAR J. and STEIN J. 2. Vnitřn. a Neurol. Klin. KU, Praha. \*Elektroencefalografické změny u nemocných hypertensní nemocí. Electroencephalographic changes in hypertensive disease VNITŘ. LEK. 1956, 2/1 (13-19) Graphs 7 Tables 1

Sixty-six hypertensive patients were examined in different stages. None of the patients presented clinical signs of organic involvement of the CNS. Forty-six patients had a normal EEG, and 27 of them showed various anomalies. The remaining 20 patients had clearly pathological records. An attempt to demonstrate a correlation between EEG changes and the clinical status failed. The high percentage of pathological findings shows that the prognostic importance of EEG examination seems to be great. Further studies are required. (VIII, 6)

KORBELAR J.

Czechoslovakia / Pharmacology, Toxicology, Cardio-Vascular, V Drugs

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000824530010

Abs Jour : Ref Zhur-Biol., No 8, 1958, 37603

Author : Korbelaar J., Blazek Z.

Inst : Not given

Title : Hypotensive Action of Folium oleae (Gipoten-zivnoye deystviye Folium oleae).

Orig Pub : Vnitsni lekazstvi, 1956, 2, No 4, 348-350

Abstract : Olive leaves (1) contain "minnit," carotene, tannin, gallic acid, glucosides, and so forth. Hypotensive effect is apparently produced by the glucosides. 1 is applied in the form of infusions, extracts, and special preparations of types such as the German "olivizat," Italian "ipoliol," and French "oliviaza." The course of treatment is 3 weeks. The preparations are administered internally in doses of 20 to 30 drops 3 to

KORBEIAR, J.; STEIN, J.

Changes in electroencephalographic tracings in patients with hypertension after treatment with pentamethonium. Cesk. neur. 21 no.5:332-339 Sept 58.

1. II. interni klinika EU v Praze, prednosta prof. dr. A. Vancura  
neurologicka klinika ku v Praze, prednosta akademik K. Henner.

(ELECTROENCEPHALOGRAPHY; in various dis.

hypertension, eff. of pentamethonium ther. (Cz))

(HYPERTENSION, ther.

pentamethonium, eff. on EEG (Cz))

(METHONIUM COMPOUNDS, ther. use

pentamethonium in hypertension, eff. on EEG (Cz))

~~NOBILITA, J.~~  
KORBELAR, J.; ROSOL, Z. (okresni internista, OUNZ, Praha-zapad)

Pulseless disease, or Takayashu syndrome. Cas. lek. cesk. 97 no.8:249-251 21 Feb 58.

1. II Interni klinika KU v Praze, prednosta prof. F. Herles.  
    (AORTA, dis.  
    aortic arch synd., case report (Cz))

STEPANEK, J.; KORBELAR, J.

A few remarks concerning diuretic treatment. Cas. lek. cesk. 104  
no.24:662-665 18 Je '65.

1. II. interni klinika fakulty vseobecneho lekarstvi Karlovy  
University v Praze (prednosta: prof. dr. F. Herles, DrSc.).

KORBELAR, I.

Estimation of pelentan disintegration in blood. Cas.lek.cesk. 89  
no.16:447-449 21 Ap '50. (CIML 19:2)

1. Of the Fourth Internal Clinic of Prof. B.Prusik, M.D. in Prague.

KORBEKAR, O.

Modifications of blood pelentan levels in infectious hepatitis. Gastroenterologia bohema 4 no.2-4:100-103 Oct 50.  
(CJML 20:5)

1. Of the Fourth Internal Clinic in Prague (Head--Prof.B.Prusik,M.D.).

KORBELAR, O.

CZECH

Estimation of Pelentan metabolites in the blood. O. Korbelař (IV. Intern. klin., Prague). *Časopis lékařů* 89, 447-3(1959).—The blood level of Pelentan [ethyl bis(4-hydroxy-3-coumarinyl)acetate] (I) and its possible metabolites was colorimetrically (cf. v. Keule and Pulver, *Schweiz. med. Wochenschr.* 78, 840, 850(1948)) estd. in healthy human subjects after oral administration of 12, 10, and 19 mg./kg. of I. The max. level was observed 3-6 hrs. after the administration. No detectable units were found after 24 hrs. The relation of blood metabolites of Pelentan to the prothrombin level. *Ibid.* 849-3.—The blood level of I and its possible metabolites has been estd. simultaneously with the prothrombin level in normal subjects and in 25 patients with vascular or liver diseases. The most pronounced decrease of prothrombin level corresponds to or lags behind the max. of pelentanambi, which in patients with Buerger's disease is slightly lower than in healthy subjects. In liver diseases the concn. curves differ from normal subjects. Antonín Žemčák



KORBELAR, O.

Correlation of pelentan metabolites in blood prothrombin in hepatic and vascular diseases. Cas.lek.cesk. 89 no.19:540-543 12 My '50.  
(CML 19:3)

1. Of the Fourth Internal Clinic, Charles University (Head -- Prof. B.Prusik, M.D.).

NEUMAN, J.; KORBELAR, O.

Electrocardiographic control of patients with peptic ulcer treated  
with prolonged sleep. Sborn. pathofysiol. trav. vyz. 6 no. 1-2:  
39-41 July 1952. (CML 22:4)

1. Of the Fourth Internal Clinic (Head--Prof. B. Prusik, M. D.) of  
Charles University, Prague.

RIEDL, Ota, MUDr; KORBELAR, Ota, MUDr

Leg gangrene in deep phlebothrombosis. Cas.lek.cesk. 91 no.44:  
1255-1258 31 Oct 52.

1. Ze IV. interni kliniky Karlovy university v Praze, prednosta:  
prof. dr. Bohumil Prusik.

(LEG, gagrene,  
caused by thrombosis)  
(THROMBOSIS, complications,  
gangrene of leg)  
(GANGRENE,  
leg, caused by thrombosis)

KORBELAR, O.

NEUMAN, J.; KORBELAR, O.; GREGOR, O. "Myocardial Complications in the Course of Diseases of the Bile Ducts." p. 48. (Casopis Lekaru Ceskych. Vol. 93, no. 2, Jan. 1954. Praha).

SO: Monthly List of East European Accessions, Vol. 3, No. 6, June 195<sup>4</sup>, Uncl.

ACC NR: AP6033305

SOURCE CODE: UR/0409/66/000/004/0602/0604

AUTHOR: Dashkevich, L. B.; Korbelaynen, E. S.

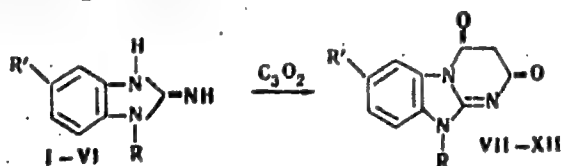
ORG: Leningrad Chemicopharmaceutical Institute (Leningradskiy khimiko-farmatsevticheskiy institut)

TITLE: Carbon suboxide and some of its reactions. Part 24: Reaction of carbon suboxide with 2-aminobenzimidazoles

SOURCE: Khimiya geterotsiklicheskikh soyedineniy, no. 4, 1966, 602-604

TOPIC TAGS: carbon suboxide, benzimidazole, *chemical reaction, carbon compound*

ABSTRACT: Carbon suboxide was reacted with aminobenzimidazoles, and the reaction was found to have the following course:



I, VII R=R'-H; II, VIII R-H, R'-CH<sub>3</sub>; III, IX R-CH<sub>3</sub>, R'-H;  
IV, X R-C<sub>2</sub>H<sub>5</sub>, R'-H; V, XI R-C<sub>3</sub>H<sub>7</sub>, R'-H; VI, XII R-C<sub>4</sub>H<sub>9</sub>, R'-H.

Card 1/3

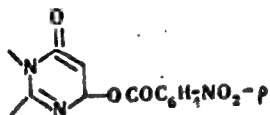
UDC: 547.78.854+546.262

ACC NR: AP6033305

"APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R000824530010

The reaction of carbon suboxide with 2-aminobenzimidazole (I), 2-amino-3-methylimidazole (II), 1-methyl-2-aminobenzimidazole (III), 1-ethyl-2-aminobenzimidazole (VI), 1-n-propyl-2-aminobenzimidazole (V) and 1-n-butyl-2-aminobenzimidazole (VI) produced compounds VII-XII respectively. The presence of keto-enol isomerism is postulated in the pyrimidobenzimidazole system. With p-nitrobenzyl chloride, compounds IX-XII form esters of p-nitrobenzoic acid and the corresponding enol:



The decomposition temperatures of compounds VII-XII and p-nitrobenzyl derivatives are given in Table 1. Orig. art. has: 1 table.

Card 2/3

ACC NR: AP6033305

Table 1

Compound No.	Decomposition temperature, °C	Empirical formula	Yield, %	p-Nitrobenzyl derivatives	
				Decomposition temperature, °C	Empirical formula
VII	Bmwe 310	$C_{10}H_7N_3O_2$	92	—	—
VIII	283—285	$C_{11}H_9N_3O_2$	85	—	—
IX	262—264	$C_{11}H_9N_3O_2$	88	258—260	$C_{12}H_{11}N_4O_4$
X	281—283	$C_{12}H_{11}N_3O_2$	90	195—196	$C_{13}H_{13}N_4O_4$
XI	253—255	$C_{13}H_{13}N_3O_2$	85	177—178	$C_{20}H_{19}N_4O_4$
XII	245—246	$C_{13}H_{13}N_3O_2$	86	168—169	$C_{21}H_{19}N_4O_4$

SUB CODE: 07/ SUBM DATE: 14Feb65/ ORIG REF: 007/ OTH REF: 003

Card 3/3

DASHKEVICH, L.B.; KORBELAYNEN, E.S.

Carbon suboxide and some of its reactions. Part 19: Reaction of carbon suboxide with 2-amino-oxazoles, -oxazine, and -thiazine. Zhur. ob. khim. 34 no.10:3427-3429 0 '64.

(MIRA 17:11)

1. Leningradskiy khimiko-farmatsevticheskiy institut.

Korbelikova, V.

Soot in the paper industry. p. 231. PAPIR A CELULOZA. (Ministerstvo  
lesu a drevarskeho prumyslu) Praha. Vol. 9, no. 11, Nov. 1954.

SOURCE: EEAL - LC Vol. 5 No. 10 Oct. 1956



BK

16630  
Z/042/62/000/004/001/002  
E197/E435

9.7200

AUTHOR: Korbell, Juraj, Engineer

TITLE: Derivation of function and accuracy of electronic multipliers based on triangular waves

PERIODICAL: Elektrotechnický časopis, no.4, 1962, 223-230

TEXT: The purpose of the paper is to show the effect of a change in amplitude of the triangular carrier wave on the accuracy of analogue multiplication. Proceeding from the statement that electronic multipliers using a carrier wave are generally stable, the author quotes the well known formula of the "difference of squares" for obtaining a product and considers the case where the carrier wave changes strictly linearly with time in a circuit which performs two functions: inversion and limitation. From the geometry of waveform, the author derives first a proof of the validity of the basic equation, then shows the effect of an increase in the amplitude of the carrier wave by a small amount and obtains the formula

$$\xi = 2 \left( \frac{\Delta E_N}{E_N} \right)^2 \cdot 100 \quad (17)$$

Card 1/2

Derivation of function ...

Z/042/62/000/004/001/002  
E197/E435

in which  $\xi$  - the relative error,  $E_N$  - the voltage of the carrier wave and  $\Delta E_N$  - the unwanted increase of carrier voltage. A 1% change in carrier amplitude will cause an error of 0.02%. There are 3 figures.

ASSOCIATION: Elektrotechnický ústav SAV, Bratislava 9  
(Institute of Electrical Technology SAV, Bratislava 9)

SUBMITTED: October 2, 1961

Card 2/2

KORBELL, J.

A conference on the methods of electric circuit analysis. El tech  
cas 13 no.2:127-128 '62.

KORBELL, J.

Transistor water conductivity measuring instrument. El tech  
cas 13 no.10:634-636 '62.

KORBELL, Juraj

"Automatic phase synchronization" by Z. Sobotka. Reviewed by  
Juraj Korbali. El tech cas 15 no.2:128 '64.

JOHN, C., Dr.; KORBELLAR, J., Dr.

Brucellosis. Prakt. lek., Praha 35 no.13:297-301 5 July 55.

1. Z ustavu pro lekářskou mikrobiologii a imunologii KU v  
Praze, přednosta prof. Dr. F. Patocka a z II. int kliniky  
KU, prof. Dr. A. Vancura.

(BRUCELLOSIS

incidence, diag. & ther.)

KORBELL, Juraj, inz.

Deduction of the performance and precision of a triangle-wave-type electronic multiplier. El tech cas 13 no.4:223-229 :62.

1. Ceskoslovenska akademie ved, Elektronicky ustav Slovenske akademie ved, Bratislava 9, Dubravska cesta.

KORBELL, J.

A scientific conference on data processing machines. El tech  
cas 14 no.2:111 '63.

ACC NR: AP6024711

SOURCE CODE: CZ/0042/65/000/010/0620/0626

AUTHOR: Korbell, Juraj; Kokavec, Jan

ORG: none

TITLE: Heavy-duty rectangular-wave generator with Zener diodes and a transducer

SOURCE: Elektrotechnicky casopis, no. 10, 1965, 620-626

TOPIC TAGS: Zener diode, electronic equipment, electric generator, current stabilization, voltage stabilization, circuit design

ABSTRACT: The article presents the calculations and circuits of a new type of 50-cycle rectangular-voltage generator with a capacity of 10 watts which advantageously combines the properties of a transducer current stabiliser and a voltage stabiliser by means of Zener diodes. Orig. art. has: 16 figures and 12 formulas. [JPRS: 34,691]

SUB CODE: 09 / SUM DATE: none / ORIG REF: 003 / OTH REF: 003

Card 1/1



FOUO, 1.

"Acceptance Conditions in Performance Specification P-5".  
Acceptance conditions to be complied with during the  
inspection of new building machinery to satisfy approved  
standards of performance and workmanship as well as design.

SO: Mechanisace, Czechoslovakia, Vol 3, No 1,  
Jan 1954, (AF-617422, 12 Apr 1954)

KORBER, J.

Selection of a proper method for production of steel in foundries. p. 116.

SLEVARENSTVI Vol. 4, no. 4, Apr. 1956.

Czechoslovakia

Source: EAST EUROPEAN LISTS Vol. 5, no. 7 July 1956

KORBER, L.

Material and production basis of the building industry and  
its territorial distribution. Stavivo 41 no.3:78-79 Mr '63.

1. Ministerstvo vystavby, Praha.

KAHOVCOVA, Jitka, inz.; HAUMER, Jaroslav, inz.; KORBEN, Zdenek

Re-esterification of methyl ester of fat acids with saccharose.  
Prum potravin 15 no.9:477-479 S '64.

1. Research Institute of the Fat Industry, Rakovnik.

KORBEYNIKOV, V.P.

V. P. V.P.

5498\* (Russian) Formulas for Calculation of Shock Wave Front Characteristics in Gas  
Свойства волновых фронтов при взрыве в газе, В. П.  
Nov 21.

CZECHOSLOVAKIA / Human and Animal Morphology  
(Normal and Pathological). Nervous System.

S-2

Abs Jour: Ref Zhur-Biol., No 10, 1958, 45503

Author : Korbicka, J., Malinovsky, L.

Inst : Not given

Title : Materials for the Determination of the Firmness  
of the Falx Cerebri in the Adult and the Newborn.

Orig Pub: Ceskosl. morfol., 1956, 4, No 4, 365-378

Abstract: With the aid of a specially constructed simple device, the elasticity and firmness of the anterior, median and posterior sections of the great crescent-shaped extension (CE) and strips, fashioned from it, were ascertained. CE was stretched along its length. It was established that, in the adult, the posterior section of CE exhibited greater elasticity and firmness, while the median section

Card 1/1

16

BZONEK, J.; KORBICKA, J.; OPLETAL, A.; UCHYTIL, B.

Metastatic cylindroma. Cesk. otolar. 11 no.5:261-265 '62.

1. Klinika chorob usnich, nosnich a krenich, prednosta prof. dr.  
R. Hladky, a I. patologickoanatomicky ustav lekarske fakulty University  
J. Ev. Purkyne v Brne, prednosta prof. dr. J. Svejda.  
(CYLINDROME) (NEOPLASM METASTASES)  
(SALIVARY GLANDS) (MAXILLARY SINUS) (TONGUE NEOPLASMS)  
(TRACHEAL NEOPLASMS)

ATANASOV, D.; KORBICKA, J.

Diverticuloid neurinoma of the duodenum. Rozhl. chir. 44 no.12:  
839-841 D '65.

1. II. chirurgická klinika (prednosta prof. dr. J. Navrátil, DrSc.)  
a 1. patologickoanatomický ústav (prednosta prof. dr. J. Svejda, DrSc.)  
lékarské fakulty University J.E. Purkyně v Brně.



KORBIEL, J.; KWIECIEN, G.

Preliminary breeding works on the improvement of the quality of bacon hogs. p. 18

GOSPODARKA MIESNA (Polskie Wydawnictwa Gospodarcze) Warszawa, Poland.  
Vol. 11, no. 4, Apr 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 9, Sept 1959  
Uncl.

STEC, Jan, mgr., inż. (Tarnow); KORBIEL, Jozef (Tarnow)

Szymwald - Zalasowa as a center for methodical improving  
breeding and production of bacon cattle. Gosp miesna 14  
no.4:12-16 Ap '62.

KORBINITS, Andras

"Norms for calculation of preheaters" by M.L. Vajszman.  
Reviewed by Andras Korbonits. Cukor 18 no.2:48 F '65.

"Operation of crude naphtha-fired shaft limekilns" by F.I.  
Strigunov. Reviewed by Andras Korbonits. Ibid.:55

"Large-scale methods for the maintenance of sugar industry  
installations" by B.V. Sinel'nikov. Reviewed by Andras  
Korbonits. Ibid.:55

KORBINSKIY, Aron Yefimovich; PROKOP'YEVA, N.B., red. izd-va; KASHINA,  
P.S., tekhn. red.

[Numbers operate machine tools] Chisla upravliat stankami.  
Moskva, Izd-vo Akad. nauk SSSR, 1961. 189 p. (MIRA 14:5)  
(Machine tools-- Numerical control)

GALANIN, M.D., KORBKIN, V.V., LEONTOVICH, A.M., SMORYCHKOV, V.M.  
AND CHIZHIKOVA, L.A.

"Coherence, spectra time scanning and pulsations of the ruby laser emission."

Report submitted to the Third Intl. Symp. on Quantum Electronics.  
Paris, France 11-15 Feb 1963

11-A

Water-soluble dinitrophenyl derivatives of proteins.  
P. Šorm, J. Kříž, and L. Matoušek (Tech. Univ., Prague).  
*Collection Czechoslov. Chem. Commun.* 13, 205-302 (1950)  
(in English).—H<sub>2</sub>O-sol. dinitrophenyl (DNP) derivs. of  
horse serum albumin, and ovalbumin were prepd. in a man-  
ner to prevent denaturation, by eliminating the use of  
EtOH and working in NaHCO<sub>3</sub> soln. DNP serum albumin  
was obtained in cryst. form. Bernard Klein



KORBL, J.

2

✓ 2491: Catalyst for oxidative reactions. cf. Korbl. *Chem. Zvest.*  
Czech. patent 80,488; date appl. 1.12.55. The  
product of the thermal decomposition of  $\text{Ag}_2\text{MnO}_4$   
having a probable composition of  $8\text{Ag}_2\text{O} \cdot 13\text{MnO}_2$   
 $\text{MnO}_2$  catalyses at  $400^\circ$  to  $450^\circ$  the oxidation of  
numerous org. and some inorg. compounds. This  
catalyst is useful as a filler for combustion tubes  
for elementary organic analysis. (Cf. *Anal. Abstr.*,  
1957, 4, 810.) *Chem. Abstr.*



KÖRBL, J.

733. Use of silver permanganate in analysis. I. Properties of silver permanganate and of its thermal decomposition product. J. Körbl (Pharm. and Biochem. Research Inst., Prague). Coll. Czech. Chem. Commun., 1955, 20 (4), 918-931.—Solid  $\text{AgMnO}_4$  oxidises organic matter violently on heating. Water and  $\text{CO}_2$  are evolved quantitatively, whilst

halogen present in the sample remains as silver halide, and S as  $\text{Ag}_2\text{SO}_4$  and  $\text{MnSO}_4$ . Organic N, as well as N from ammonium salts, KCN and other inorganic compounds of N, is oxidised to nitrogen oxides, which partly remain as  $\text{AgNO}_3$  with a trace of  $\text{Mn(NO)}_2$ . The thermal decomposition product of  $\text{AgMnO}_4$  reacts similarly but less violently; in addition, it will catalyse the oxidation of CO in air and of  $\text{NH}_3$  in oxygen. The thermal decomposition product also shows absorptive powers. Sulphur dioxide is absorbed as  $\text{Ag}_2\text{SO}_4$  and  $\text{MnSO}_4$ , whilst  $\text{NO}_2$  can be selectively absorbed from a mixture of  $\text{CO}_2$ , O and  $\text{NO}_2$  at room temp. as  $\text{AgNO}_3$ , particularly if the material is moistened with water. II. Estimation of carbon and hydrogen in organic compounds. J. Körbl. *Ibid.*, 1955, 20 (4), 933-961.—The Pregl apparatus for the semi-micro determination of C and H in organic compounds is adapted to the use of the thermal decomposition product of  $\text{AgMnO}_4$  as a catalyst. A relatively low temp. of  $\approx 450^\circ\text{C}$  is possible, and the whole analysis can be completed in an hour. Halogens and  $\text{SO}_2$  are retained by the catalyst, and  $\text{NO}_2$  is removed in a tube containing moist catalyst inserted between the  $\text{H}_2\text{O}$ - and  $\text{CO}_2$ -absorption vessels. J. H. WATON

Korbl, J.

1384. Use of silver permanganate in analysis.  
The determination of carbon and hydrogen  
with a short column of catalyst in the presence of  
Kochi, Pham and Hachem. *Anal. Chem.* 1984, 56, 1000.  
The authors report on the use of silver permanganate as a catalyst in the determination of carbon and hydrogen in organic compounds. The catalyst is used in a short column and the reaction is carried out at 100°C. The authors found that the catalyst is very effective and that the reaction is very rapid. The authors also report on the use of silver permanganate as a catalyst in the determination of carbon and hydrogen in organic compounds. The catalyst is used in a short column and the reaction is carried out at 100°C. The authors found that the catalyst is very effective and that the reaction is very rapid.

KOPEL, J., and others.

"Metallochromic indicators. II. 3,5-dihydroxy-4-nitroazobenzene and 3,4-dihydroxyazobenzene-4'-sulfonic acid as simple metallochromic models of Pyrocatechol Violet."

p. 1416 (Collection of Czechoslovak Chemical Communications. Praha, Czechoslovakia.)

Monthly Index of East European Accessions (EEAI) LC. Vol. 22, no. 5, Oct. 1957

KORBL, Jiri

4

Analytical applications of silver permanganate. I. Properties of silver permanganate and the product of its thermal decomposition. Jiri Korbl (Vezkumské ústav far. biochem., Prague). *Chem. Zvesti* 49, 838-841 (1955).  
 is prepd. by dissolving 101 g.  $KMnO_4$  in 4 l. boiling  $H_2O$ , adding 204 g.  $AgNO_3$ , allowing to crystallize, filtering the product with a fritted-glass crucible, washing with 0.5 l. concd.  $H_2O$ , recrystg. the crude product from 4 l. boiling  $H_2O$ , washing and drying at 60-70° (yield 188 g.). It decomp. by heating in 2-g. portions in a test tube until spontaneous reaction occurs. The decompn. product has 4 times larger vol. than  $Ag_2O$ , oxidizes inorg. and org. substances, catalyzes the oxidation of CO to  $CO_2$ ,  $NH_3$  to  $HNO_3$ , and absorbs  $N_2O$  in the cold and  $SO_2$  at a higher temp. II. Determination of carbon and hydrogen in organic compounds. *Ibid.*, 843-8.  
 The decompn. product of  $Ag_2MnO_4$  was used as a combustion catalyst in the detn. of C and H in org. compds. The catalyst absorbs halogens and  $SO_2$ . The combustion was carried out at 450° and the time required for a semimicro-analysis was cut down to 1 hr. The decompn. product was also used for the absorption of  $N_2O$  in a tube imposed between the  $H_2O$  and  $CO_2$  absorption tubes. The main advantages of the new filling are: easy standardization of the catalyst, the filled tube can be readily used without previous testing, the life of the catalyst is long (100 analyses), the temp. is low and stands  $\pm 50^\circ$  deviation round 450°, the catalyst is at the same time absorbent for halogens,  $SO_2$ , and at normal temp. also for  $N_2O$ .  
 M. Hudlický

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KORBL

CZECH

Open absorption tubes for semimicroelemental analysis.  
J. Korbl (Výzkumný ústav chem. průmyslu, Prague).  
Chem. Listy 49, 229-31 (1954). Stop-cock-free open absorp-  
tion tubes for the C and H detn. are prepd. by tapering a  
proper glass tube on both ends after filling with anhydrous  
or sodium asbestos and anhydrous, resp. The tubes can be  
disposed of after exhausting. The diffusion between the in-  
side of the tubes and the atm., when the tubes are not in  
operation, is prevented by a special spring-holder keeping  
both ends of the tubes closed by rubber cushions. M. Hudlický

10/24/54

KORBL, J.

"Analytic use of silver permanganate. III. Determination of carbon and hydrogen using a short contact layer"

Chemické Listy. Praha, Czechoslovakia. Vol. 49, no. 10, Oct 1955

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclass

Korbl, J.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R00082453001

CZECHOSLOVAKIA/Analytical Chemistry - Analysis of Organic Substances

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4826

Author : Korbl Jiri, Blabolil Karel

Title : Analytical Use of Silver Permanganate. IV. Micro-Determination of Carbon and Hydrogen

Orig Pub : Chem. listy, 1955, 49, No 11, 1664-1666; Sb. chekhosl. khim. rabot, 1956, 21, No 2, 318-321

Abstract : The product of thermal decomposition of  $\text{AgMnO}_4$  (I) (RZhKhim, 1956, 65356) can serve as the filling of a combustion tube for the determination of C and H. Traces of organic substances present in the oxygen being used are removed in an additional tube containing I, having a length of 3.5 cm, at a temperature of 400-500°. Absorption of  $\text{H}_2\text{O}$  and  $\text{CO}_2$  is effected in open vessels, according to Pregl. To remove  $\text{NO}_2$  from the gases, following combustion of N-containing substances use is

*chem* 1884. Alkalimetric determination of some derivatives of 4-hydroxycoumarin in anhydrous pyridine. F. Jančík and J. Korb (Res. Inst. Pharm. and Biochem., Prague, Czechoslovakia). *Czechoslov. Farm.*, 1950, 5 (7), 408-410. An ethanolic soln. of KOH (0.1 N) is used for the visual titration of ten derivatives of 4-hydroxycoumarin in anhydrous pyridine with 3:4-dihydroxy-4'-nitroazobenzene as indicator. *Procedure*—Dissolve the sample (100 to 200 mg) in dry pyridine (30 ml). Add three drops of indicator soln. (0.05% in methanol) and titrate to an intense blue colour. The average error is  $\pm 0.5\%$ . J. VOLKE

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their  
Application. Pharmaceuticals. Vitamins. Antibiotics.

H-17

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5760.

Author : Jancik, F. Jir; Duben, Frantisek; Krbal, Jiri.

List :  
Title : Oxidimetric Determination of Methionine.

Orig Pub: Ceskosl. farm., 1956, 5, No 9, 515-516.

Abstract: Methionine (I) is determined in pure preparations by  
potentiometric titration with 0.1 N and 0.01 N  $\text{KBrO}_3$  in  
the presence of  $\text{KBr}$ , as well as with 0.1 N  $\text{ICl}$ . Titra-  
tion of I with 0.1 N  $\text{KBrO}_3$  was carried out with weighed  
samples of 32.3 - 143.3 mg and with maximum divergences  
of -0.21 and +0.15%, same with 0.01 N  $\text{KBrO}_3$  was carried  
out with weighed samples of 1.15 - 15.25 mg and errors  
from -0.46 to +0.87% (applicable to microdetermination).

Card : 1/2

*Sci Res Pharm.: Biochem Inst. Prague*



KOHL, J.

910. The use of silver permanganate in analysis.  
VI. A simple and rapid method for the detection  
of the elements in organic compounds. J. Kohl  
and R. Pichl (Chem. & Biochem. Res. Inst., Czech  
Acad. Sci., Prague, Czechoslovakia) *Chem. Zvesti*  
*Chem. Commun.*, 1956, 21 (4), 955-959 (in German)

—A simple micro-method for the detection of C, H,  
Hg, N, Cl, Br, I, S, P and As in organic compounds  
is described. From 200.

is gently fused in a special tube with the re-  
position product of AgMnO<sub>4</sub> (see 910).

formation of the products.

REMARKS: Hg condenses on the cold part of the  
tube and is detected by a blue coloration of the  
silver mirror.

essentially (no NH<sub>4</sub>Cl) as Ag<sub>2</sub>SO<sub>4</sub> (see 910).  
No decomposition of the products.

are not detected.  
can be used.

J. h. N. N. N.

PMK

KÖRBL, J.

2072 Xylenol orange new indicator for the  
EDTA-titration

Orange, (8-dihydroxy-2-naphthyl)-  
cresolsulphonphthalein (1), retains the acid-base  
properties of o-cresolphthalein and acts as a metal  
indicator even in acid soln., giving a distinct colour  
change in direct EDTA titration. Examples of its  
use are given. The results of the titrations are  
very accurate. The indicator is stable in acid soln.  
90%. Zr may be titrated with EDTA in the presence of  
appropriate buffer as well as certain other  
metals. The indicator may be used in a wide range of  
soln. The procedures described are also suitable  
for use on a micro-scale. G. M. WHITTON

7

KÖRBL, Jiri

✓ Analytical applications of silver permanganate. V.  
Complexometric determination of combustible sulfur as  
manganese (II) sulfate. Jiri Körbl and Rudolf Pfabl  
(Pharm. and Biochem. Research Inst., Prague). Chem.  
Listy 50, 232-5(1958); cf. C.A. 50, 737g. Thermal de-  
compos. product of  $\text{AgMnO}_4$  (cf. C.A. 50, 3044c) calcined at  
600° for 3 hrs. serving as contact and adsorption material  
quantitatively converted products of S combustion to  
 $\text{Ag}_2\text{O}$  and  $\text{MnSO}_4$ . The reaction was carried out with  
4-22 mg. S in a combustion tube that was heated 1-2 min.  
to 450-500° in a stream of  $\text{O}_2$ . After rinsing out the contents  
with 50 ml. hot water and boiling for a short time, solid  
 $\text{MnO}_2$  and 0.5 g. urea peroxide hydrate divided into 3  
portions was added successively to the soln. under vigorous  
stirring, thus effecting a complete conversion of  $\text{Ag}_2\text{SO}_4$  to  
an equiv. amt. of  $\text{MnSO}_4$ . Following the addn. of  $\text{NH}_4\text{OH}$ .  
 $\text{HCl}$  to prevent opalescence and Eriochrome T as  
indicator,  $\text{MnSO}_4$  was titrated with 0.05N soln. of di-Na

(2)

salt of ethylenediaminetetraacetic acid. The method exceeds all other known methods in speed, the whole procedure taking less than 30 min. VI. A simple and rapid qualitative test for elements in organic compounds. *Ibid.* 230-9.---Destructive oxidation carried out in a glass pipet (diam. 0.4, length 13 cm.) by heating 0.1-1.0 mg. of an org. compd. with 50 mg. of the decompn. product of  $\text{Ag-MnO}_4$  (cf. *loc. cit.*) gives rise to reaction products which are partly liberated ( $\text{H}_2\text{O}$ ,  $\text{CO}_2$ ,  $\text{Hg}$ ) partly absorbed by the reaction material as Ag compds. The presence of H is shown by the moisture on the glass sides,  $\text{CO}_2$  reacts with  $\text{Ba(OH)}_2$ , metallic Hg condenses on the glass sides and is detected visually or with dithizone. Compds. absorbed in the mixt. are eluted gradually according to their different solubilities in water or  $\text{NH}_4\text{OH}$  and the individual elements are detd. as follows: N with diphenylamine, S as  $\text{BaSO}_4$ , halogens as Ag salts, P and As with Mo reagent.

L. J. Urbánek

KORBL, Jiri

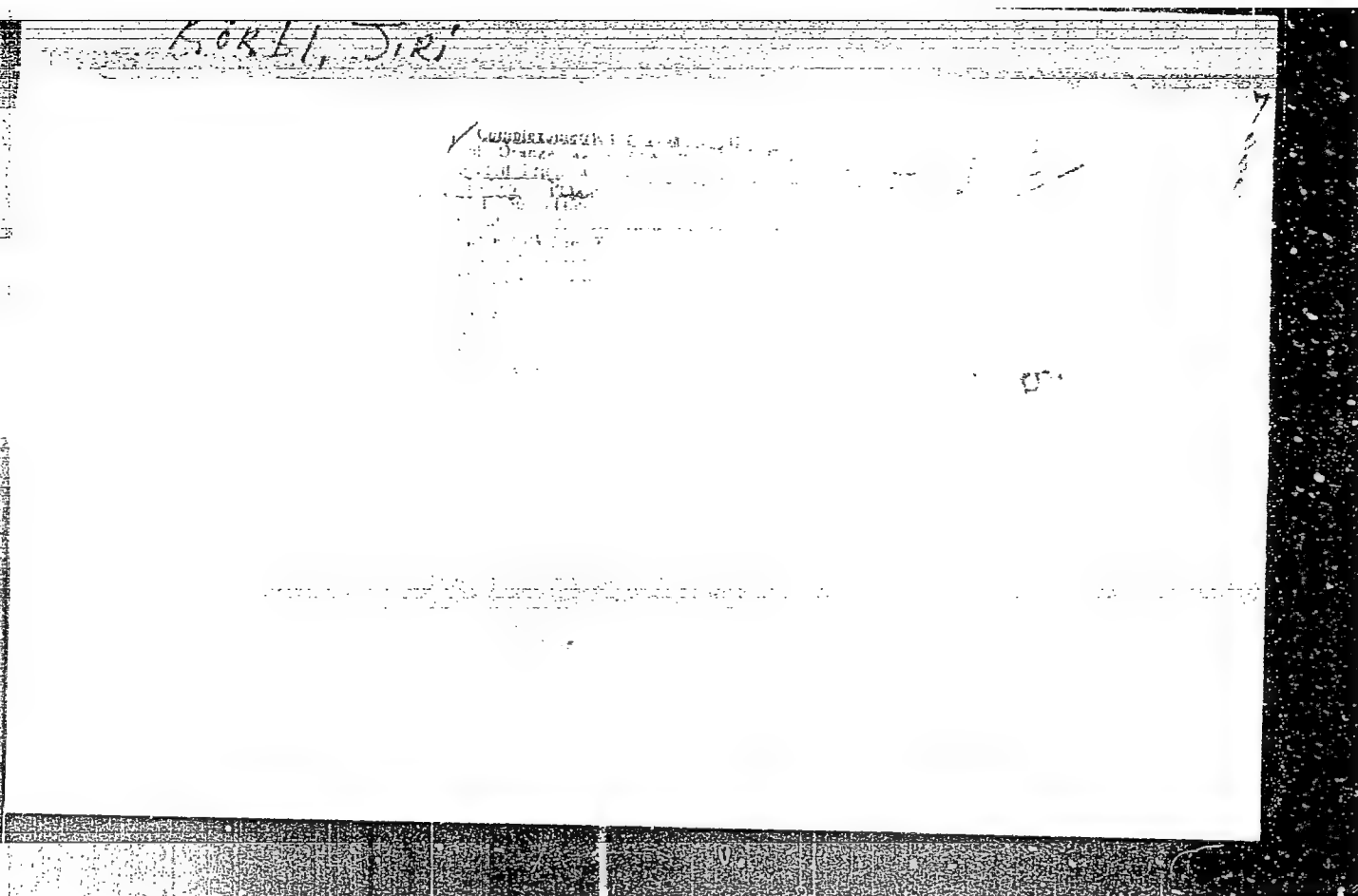
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Organosilicon compounds VIII Determination of  
carbon and hydrogen in organosilicon compounds

overcome by special devices for weighing, and for breaking  
the capillaries inside the combustion tube. Explosions of  
volatile compounds during the combustion are prevented by a  
special way of combustion and by using a series of stoppers of  
Ag wool and asbestos. The combustion requires up to 30  
min.

M. Hudlický

*M. Hudlický*



SECRET

KCRBL J.

2477. Some new metallochromic indicators of the complexon type. J. Káchl and R. Fígl (Pharm. and Biochem. Res. Inst., Czech Acad. Science, Prague). *Chem. & Ind.*, 1957, (8), 233-234. A series of twelve 3:3'-bis-NN-di(carboxymethyl)-aminomethyl derivatives of acid-base indicators of the phthalein and sulphonaphthalein groups have been prepared by condensation of 1 mole of the

phthalein or sulphonaphthalein dye with 2 moles of iminodiacetic acid and 2 moles of formaldehyde. Their colour changes, and characteristics as complexometric indicators, are described.

W. J. WRIGHT

Phy. Org.

50861 J

11166\* (Russian.) Silicoorganic Compounds. Kremnifor-  
ganicheskie soedineniya. VIII. Determination of Carbon  
and Hydrogen in Silicoorganic Compounds. Opredelenie  
ugleroda i vodoroda v kremniforganicheskikh soedineni-  
yakh. I. Kerbl' and R. Komari. Collection of Czechoslovak  
Chemical Communications, v 22, Feb 1957, p 222-229

A simple semi-micro analytic process was developed. A 3.5  
cm. layer of the product of decomposition of Ag permanganate  
was used as a combustion catalyst. A gradual increase in tem-  
perature made it possible to analyze the substances having low  
boiling points.

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Korbi, J.

Distr: 4E20(j)

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 Complexometric titrations (chelometry). XXV. Xylenol Orange as a new, specific indicator. J. Korbi, R. Pribil, and A. Emr. Collection Czech. Chem. Commun. 22, 961-6 (1957) (in German).—Xylenol Orange [3,3'-bis[bis-(carboxymethyl)aminomethyl]-o-cresolsulfonephthalein], was found to be an exceptionally satisfactory indicator in acid soln. The compd. itself is a bright-red powder. In water alone it changes color from yellow to red-violet at about pH 6. With a variety of cations it forms an intensely red to red-violet complex in acid soln. The lower limit of pH at which a color change is observed for certain cations is:  $Zr^{4+}$ , 0.1N  $HNO_3$ ;  $Bi^{3+}$ , 0.5N  $HNO_3$ ;  $Fe^{3+}$ , 0.2N  $HNO_3$ ;  $Th^{4+}$ , 0.1N  $HNO_3$ ;  $Sc^{3+}$ , 0.05N  $HNO_3$ ;  $Ph^{3+}$  or  $Al^{3+}$ , pH 3;  $Zn^{2+}$ ,  $Co^{2+}$ , or  $La^{3+}$ , pH 4;  $Cu^{2+}$ , pH 5;  $Mn^{2+}$ ,  $Ni^{2+}$ ,  $Cd^{2+}$ , and  $Hg^{2+}$ , pH 6. It was found possible to titrate some of these cations in the presence of others; a more thorough study of this aspect of the problem is forthcoming. Jean S. Donnelly—

KORBL, J.; PRIBYL, R.

"Metallocromic indicators. I. Introduction. In English."

p.1122 (Sbornik Chekhoslovatskikh Khimicheskikh Rabot, Vol. 22, no. 4,  
Aug. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 8, August 1958

Korbl, J., and others.

"Metallochromic indicators. II. 3,4-dihydroxy-nitroazobenzene and 3,4-dihydroxyazobenzene-4'-sulfonic acid as simple metallochromic models of Pyrocatechol Violet. In English."

p. 1416 (Collection of Czechoslovak Chemical Communications. Vol. 22, no. 5, Oct. 1957, Praha, Czechoslovakia.)

Monthly Index of East European Accessions (EEAI) IC, Vol. 7, no. 7, July 1958

Korbl, J.

"Metallochromic indicators. III. Preparation of 3,3'-bis-N,N-di(carboxymethyl)amino-methylthymolsulfonophthalein (Methylthymol Blue)." In English.

p. 1789. (Sbornik Chekhoslovatskikh Khimicheskikh Rabot, Vol. 22, no. 6, Dec. 1957, Praha, Czechoslovakia)

Monthly index of East European Accession (EEAI) LC, Vol. 7, No. 8, August 1958